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09/882,221	06/15/2001	Peter Michael Gits	2705-187	9267

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EXAMINER

DUONG, THOMAS

ART UNIT PAPER NUMBER

2145

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,221

Applicant(s)

GITS ET AL.

Examiner

Thomas Duong

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-14, 16, 18-19, 27-31, and 38-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14, 16, 18-19, 27-31, and 38-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to the applicants Amendment filed on October 12, 2005. Applicant amended *claims 11, 13-14, 16, 18-19, 29-30, and 40-45*. *Claims 11-14, 16, 18-19, 27-31, and 38-45* are presented for further consideration and examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. *Claims 11-14, 16, 18-19, 27-30, and 38-45* are rejected under 35 U.S.C. 103(a) as being unpatentable over Saulpaugh et al. (US006792466B1) and in view of Theimer et al. (US005493692A).
4. With regard to *claim 11*, Saulpaugh discloses,
 - *an inquirer designed to place an inquiry in a JavaSpace persistent store space called a Space, the Space part of the Scalable Infrastructure system; and* (Saulpaugh, col.2, lines 55-65; col.4, lines 32-43; col.6, lines 23-35; col.8, line 55 – col.9, line 3; col.12, lines 30-48; col.15, lines 15-29; col.15, line 67 – col.16, line 4; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9; col.11, lines 37-59)

Saulpaugh teaches of *"a space facility [that is] provided to which a client may register (or unregister) to obtain notification when something is added to or removed from the space"* (Saulpaugh, col.42, lines 42-44). According to Saulpaugh, *"the distributed computing environment relies on spaces to provide a rendezvous mechanism that brokers services or content to clients"* (Saulpaugh, col.32, lines 20-22). In other words, a client can register a query for an interested service or content with the space; and, when the service or content becomes available, the client is then notified.

Saulpaugh does teach of *"Jini [requiring] devices to support Java and thus include a Java Virtual Machine, which requires a certain amount of processing and storage capabilities that might not be present for many small devices"* (Saulpaugh, col.4, lines 33-36). However, with the advance of technology, particularly in the field of memory storage, it is capable to store large amount of data in extremely small devices such as PDA's, cell phones, etc. Also, the Applicants' citations of Saulpaugh's background section show Saulpaugh's intention of improving on a known technology of utilizing JavaSpace as a persistent store for messaging. According to Saulpaugh, *"in one embodiment, the gate factory may be platform independent code (e.g. Java code) executable within a virtual machine in the runtime environment of the device, and the constructed gate may comprises platform independent code executable within said virtual machine in said runtime environment of said device"* (Saulpaugh, col.8, lines 61-66). Saulpaugh also anticipates that *"in one embodiment, message capable network layer may be implemented from the networking classes provided by the Java2 Micro Edition (J2ME) platform, ... [which] may be*

suitable for smaller footprint devices that do not have the resources for a full Java platform" (Saulpaugh, col.12, lines 30-35). And at but not least, according to Saulpaugh, *"for example, not all devices are capable of supporting a Java runtime environment. The distributed computing environment protocol definition does not require nor imply the use of Java on a device. Nor does it preclude it"* (Saulpaugh, col.15, line 67 – col.16, line 4).

Saulpaugh discloses, *"in some embodiments, the API layer may also provide an interface for messages to communicate between objects or pass objects, such as Java objects. API's may be provided to discover an object repository or 'space', find a particular object, claim and release an object, and write or take an object to or from the object repository"* (Saulpaugh, col.11, lines 49-55). In addition, Saulpaugh teaches of *"storage (both transient and persistent) providers are examples of services that enable clients and services to store, advertise, and address content"* (Saulpaugh, col.16, lines 24-27).

- *a lurker designed to retrieve from the Space a response to the inquiry* (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9)

Saulpaugh teaches that *"the result may be put in the space, and then a notification message may be sent to client, referencing the result"* (Saulpaugh, col.46, lines 457-59) allowing the client to retrieve the result from the space.

Also, according to Saulpaugh, *"another option may be to put the result in the space, with notification via an event from the space"* (Saulpaugh, col.46, lines 60-62). In other words, a client can register a query for an interested service or

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content with the space; and, when the service or content becomes available, the client is then notified to retrieve the results from the space.

However, Saulpaugh does not explicitly disclose,

- *to determine the availability of a user in an environment*

Theimer teaches,

- *to determine the availability of a user in an environment* (Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)

Theimer teaches of *"selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user"* (Theimer, col.4, lines 27-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Theimer reference with Saulpaugh reference to provide a system to inquire about the availability of a user in a distributed computing environment through the use of a space and selectively delivering of electronic messages based on context and environment of the user. According to Saulpaugh, *"it may be desirable to locate services based on the physical location of the user and his mobile client. For example, information about the services in a local vicinity may be very helpful"* (Saulpaugh, col.7, lines 19-22). *"Similarly, information about computing resources, such as printers in a particular location, may be helpful"* (Saulpaugh, col.7, lines 24-25). And it is the objective of Theimer to teach of *"selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the*

identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user” (Theimer, col.4, lines 27-33).

5. With regard to claims 12-13, Saulpaugh and Theimer disclose,

- *the network lurking agent further comprising a sender designed to send a message when the response indicates the user is not in available in the environment. (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9; Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)*
- *the network lurking agent further comprising a receiver designed to receive a message from the Space. (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9)*

6. With regard to claim 14, Saulpaugh discloses,

- *a JavaSpace persistent store called a Space, the Space part of the Scalable Infrastructure system; (Saulpaugh, col.2, lines 55-65; col.4, lines 32-43; col.6, lines 23-35; col.8, line 55 – col.9, line 3; col.12, lines 30-48; col.15, lines 15-29; col.15, line 67 – col.16, line 4; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9; col.11, lines 37-59)*
Saulpaugh teaches of “a space facility [that is] provided to which a client may register (or unregister) to obtain notification when something is added to or removed from the space” (Saulpaugh, col.42, lines 42-44). According to

Saulpaugh, *"the distributed computing environment relies on spaces to provide a rendezvous mechanism that brokers services or content to clients"* (Saulpaugh, col.32, lines 20-22). In other words, a client can register a query for an interested service or content with the space; and, when the service or content becomes available, the client is then notified.

Saulpaugh does teach of *"Jini [requiring] devices to support Java and thus include a Java Virtual Machine, which requires a certain amount of processing and storage capabilities that might not be present for many small devices"* (Saulpaugh, col.4, lines 33-36). However, with the advance of technology, particularly in the field of memory storage, it is capable to store large amount of data in extremely small devices such as PDA's, cell phones, etc. Also, the Applicants' citations of Saulpaugh's background section show Saulpaugh's intention of improving on a known technology of utilizing JavaSpace as a persistent store for messaging. According to Saulpaugh, *"in one embodiment, the gate factory may be platform independent code (e.g. Java code) executable within a virtual machine in the runtime environment of the device, and the constructed gate may comprises platform independent code executable within said virtual machine in said runtime environment of said device"* (Saulpaugh, col.8, lines 61-66). Saulpaugh also anticipates that *"in one embodiment, message capable network layer may be implemented from the networking classes provided by the Java2 Micro Edition (J2ME) platform, ... [which] may be suitable for smaller footprint devices that do not have the resources for a full Java platform"* (Saulpaugh, col.12, lines 30-35). And at but not least, according to Saulpaugh, *"for example, not all devices are capable of supporting a Java*

runtime environment. The distributed computing environment protocol definition does not require nor imply the use of Java on a device. Nor does it preclude it" (Saulpaugh, col.15, line 67 – col.16, line 4).

Saulpaugh discloses, *"in some embodiments, the API layer may also provide an interface for messages to communicate between objects or pass objects, such as Java objects. API's may be provided to discover an object repository or 'space', find a particular object, claim and release an object, and write or take an object to or from the object repository"* (Saulpaugh, col.11, lines 49-55). In addition, Saulpaugh teaches of *"storage (both transient and persistent) providers are examples of services that enable clients and services to store, advertise, and address content"* (Saulpaugh, col.16, lines 24-27).

- *a network lurking agent designed to place the inquiry in the Space.* (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9)

Saulpaugh teaches of *"a space facility [that is] provided to which a client may register (or unregister) to obtain notification when something is added to or removed from the space"* (Saulpaugh, col.42, lines 42-44). According to Saulpaugh, *"the distributed computing environment relies on spaces to provide a rendezvous mechanism that brokers services or content to clients"* (Saulpaugh, col.32, lines 20-22). In other words, a client can register a query for an interested service or content with the space; and, when the service or content becomes available, the client is then notified.

However, Saulpaugh does not explicitly disclose,

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- *an environment setting stored in the Space, the environment setting including the availability of a device in an environment;*
- *a network receiving agent designed to receive an inquiry about the availability of the device in the environment from the Space; and*

Theimer teaches,

- *an environment setting stored in the Space, the environment setting including the availability of a device in an environment; (Theimer, col.4, lines 27-33; col.11, lines 18-55; col.14, lines 26-38)*
- *a network receiving agent designed to receive an inquiry about the availability of the device in the environment from the Space; and (Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)*

Theimer teaches of *"selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user"* (Theimer, col.4, lines 27-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Theimer reference with Saulpaugh reference to provide a system to inquire about the availability of a device in a distributed computing environment through the use of a space and selectively delivering of electronic messages based on context and environment of the device. According to Saulpaugh, *"it may be desirable to locate services based on the physical location of the user and his mobile client. For example, information about the services in a local vicinity may be very helpful"* (Saulpaugh, col.7, lines 19-22). *"Similarly, information*

about computing resources, such as printers in a particular location, may be helpful” (Saulpaugh, col.7, lines 24-25). And it is the objective of Theimer to teach of *“selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user”* (Theimer, col.4, lines 27-33).

7. With regard to claims 16, 18-19, Saulpaugh and Theimer disclose,

- *wherein the Scalable Infrastructure system notifies the network receiving agent about the inquiry when the network lurking agent places the inquiry in the Space.*

(Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)

Theimer teaches of *“selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user”* (Theimer, col.4, lines 27-33).

- *wherein the network receiving agent and the network lurking agent are designed to open devices as a result of the inquiry, the devices enabling communication.*
(Theimer, col.4, lines 27-33; col.7, lines 1-34; col.11, lines 32-55; col.14, lines 26-38)
- *the network lurking agent is designed to place a message in the Space if the inquiry is refused; and the network receiver is designed to refuse the inquiry and to receive the message from the Space.* (Saulpaugh, col.2, lines 55-65; col.15,

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lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9; Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)

8. With regard to claims 42, 31, and 44, Saulpaugh discloses,

- *identifying an environment of interest and* (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9)
- *placing an inquiry ... of interest in a JavaSpace persistent store called a Space, the Space part of the Scalable Infrastructure system.* (Saulpaugh, col.2, lines 55-65; col.4, lines 32-43; col.6, lines 23-35; col.8, line 55 – col.9, line 3; col.12, lines 30-48; col.15, lines 15-29; col.15, line 67 – col.16, line 4; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9; col.11, lines 37-59)

Saulpaugh teaches of “a space facility [that is] provided to which a client may register (or unregister) to obtain notification when something is added to or removed from the space” (Saulpaugh, col.42, lines 42-44). According to Saulpaugh, “the distributed computing environment relies on spaces to provide a rendezvous mechanism that brokers services or content to clients” (Saulpaugh, col.32, lines 20-22). In other words, a client can register a query for an interested service or content with the space; and, when the service or content becomes available, the client is then notified.

Saulpaugh does teach of “Jini [requiring] devices to support Java and thus include a Java Virtual Machine, which requires a certain amount of processing

and storage capabilities that might not be present for many small devices" (Saulpaugh, col.4, lines 33-36). However, with the advance of technology, particularly in the field of memory storage, it is capable to store large amount of data in extremely small devices such as PDA's, cell phones, etc. Also, the Applicants' citations of Saulpaugh's background section show Saulpaugh's intention of improving on a known technology of utilizing JavaSpace as a persistent store for messaging. According to Saulpaugh, *"in one embodiment, the gate factory may be platform independent code (e.g. Java code) executable within a virtual machine in the runtime environment of the device, and the constructed gate may comprises platform independent code executable within said virtual machine in said runtime environment of said device"* (Saulpaugh, col.8, lines 61-66). Saulpaugh also anticipates that *"in one embodiment, message capable network layer may be implemented from the networking classes provided by the Java2 Micro Edition (J2ME) platform, ... [which] may be suitable for smaller footprint devices that do not have the resources for a full Java platform"* (Saulpaugh, col.12, lines 30-35). And at but not least, according to Saulpaugh, *"for example, not all devices are capable of supporting a Java runtime environment. The distributed computing environment protocol definition does not require nor imply the use of Java on a device. Nor does it preclude it"* (Saulpaugh, col.15, line 67 – col.16, line 4).

Saulpaugh discloses, *"in some embodiments, the API layer may also provide an interface for messages to communicate between objects or pass objects, such as Java objects. API's may be provided to discover an object repository or 'space', find a particular object, claim and release an object, and write or take an object to*

or from the object repository” (Saulpaugh, col.11, lines 49-55). In addition, Saulpaugh teaches of “storage (both transient and persistent) providers are examples of services that enable clients and services to store, advertise, and address content” (Saulpaugh, col.16, lines 24-27).

However, Saulpaugh does not explicitly disclose,

- *as to the availability of a user in the environment*

Theimer teaches,

- *as to the availability of a user in the environment (Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)*

Theimer teaches of *“selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user” (Theimer, col.4, lines 27-33).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Theimer reference with Saulpaugh reference to provide a system to inquire about the availability of a user in a distributed computing environment through the use of a space and selectively delivering of electronic messages based on context and environment of the user. According to Saulpaugh, *“it may be desirable to locate services based on the physical location of the user and his mobile client. For example, information about the services in a local vicinity may be very helpful” (Saulpaugh, col.7, lines 19-22). “Similarly, information about computing resources, such as printers in a particular location, may be helpful” (Saulpaugh, col.7, lines 24-25). And it is the objective of Theimer to teach of*

“selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user” (Theimer, col.4, lines 27-33).

9. With regard to claims 27-28 and 38-39, Saulpaugh and Theimer disclose,

- *further comprising responding to the inquiry by a network receiving agent.*

(Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)

Theimer teaches of *“selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user”* (Theimer, col.4, lines 27-33).

- *responding to the inquiry includes accessing devices by the network lurking agent and the network receiving agent to enable communication.* (Theimer, col.4, lines 27-33; col.7, lines 1-34; col.11, lines 32-55; col.14, lines 26-38)

10. With regard to claims 29-30 and 40-41, Saulpaugh and Theimer disclose,

- *refusing the inquiry by the network receiving agent;* (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9; Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)

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- *placing a message in the Space by the network lurking agent;* (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9)
- *retrieving the message from the Space by the network receiving agent; and* (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9; Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)
- *storing the message for later access from the environment.* (Saulpaugh, col.2, lines 55-65; col.15, lines 15-29; col.16, lines 22-43; col.42, lines 42-56; col.43, lines 3-12; col.46, line 53 – col.47, line 9)

11. With regard to claims 43 and 45, Saulpaugh and Theimer disclose,

- *wherein responding to the inquiry includes determining the availability of a user in the environment according to an environment setting in the Space.* (Theimer, col.4, lines 27-33; col.11, lines 32-55; col.14, lines 26-38)

Theimer teaches of “*selectively delivering electronic messages to an identified user in a system of mobile and fixed devices, including multiple display devices and multiple users, where the identity and location of each device, display device, and user may be known to the system, based on the context of the system and the environment of the identified user*” (Theimer, col.4, lines 27-33).

Response to Arguments

12. Applicant's arguments with respect to *claims 11, 14, 42, and 44* have been considered but they are not persuasive.

13. With regard to claims 11, 14, 42, and 44, the Applicants point out that:

- *Accordingly, Saulpaugh is teaching away from the invention, and the claimed invention achieves results that would be unexpected relative to the prior art.*

However, the Examiner finds that the Applicants' arguments are not persuasive because Saulpaugh teaches of *"a space facility [that is] provided to which a client may register (or unregister) to obtain notification when something is added to or removed from the space"* (Saulpaugh, col.42, lines 42-44). According to Saulpaugh, *"the distributed computing environment relies on spaces to provide a rendezvous mechanism that brokers services or content to clients"* (Saulpaugh, col.32, lines 20-22). In other words, a client can register a query for an interested service or content with the space; and, when the service or content becomes available, the client is then notified.

Saulpaugh does teach of *"Jini [requiring] devices to support Java and thus include a Java Virtual Machine, which requires a certain amount of processing and storage capabilities that might not be present for many small devices"* (Saulpaugh, col.4, lines 33-36). However, with the advance of technology, particularly in the field of memory storage, it is capable to store large amount of data in extremely small devices such as PDA's, cell phones, etc. Also, the Applicants' citations of Saulpaugh's background section show Saulpaugh's intention of improving on a known technology of utilizing JavaSpace as a persistent store for messaging. According to Saulpaugh, *"in one embodiment, the gate factory may be platform independent code (e.g. Java code) executable within a virtual machine in the runtime environment of the device, and the constructed gate may comprises platform*

independent code executable within said virtual machine in said runtime environment of said device" (Saulpaugh, col.8, lines 61-66). Saulpaugh also anticipates that *"in one embodiment, message capable network layer may be implemented from the networking classes provided by the Java2 Micro Edition (J2ME) platform, ... [which] may be suitable for smaller footprint devices that do not have the resources for a full Java platform"* (Saulpaugh, col.12, lines 30-35). And at but not least, according to Saulpaugh, *"for example, not all devices are capable of supporting a Java runtime environment. The distributed computing environment protocol definition does not require nor imply the use of Java on a device. Nor does it preclude it"* (Saulpaugh, col.15, line 67 – col.16, line 4).

Finally, Saulpaugh discloses, *"in some embodiments, the API layer may also provide an interface for messages to communicate between objects or pass objects, such as Java objects. API's may be provided to discover an object repository or 'space', find a particular object, claim and release an object, and write or take an object to or from the object repository"* (Saulpaugh, col.11, lines 49-55). In addition, Saulpaugh teaches of *"storage (both transient and persistent) providers are examples of services that enable clients and services to store, advertise, and address content"* (Saulpaugh, col.16, lines 24-27).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE

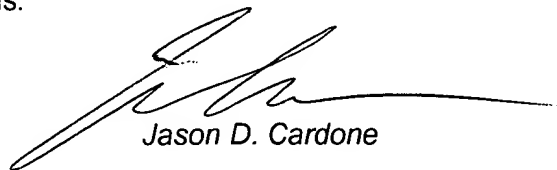
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MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

January 3, 2006



Jason D. Cardone

Supervisory PE (AU2145)